Assessment of Loan default Trend on the Amount of Loan Granted to Farmers in Kwara State, Nigeria 1984- 2014

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Abstract— This study was carried out to assess the growth trend in the amount of loan granted to farmers in the study area for the period 1984-2014. Secondary data was used and sourced from central bank of Nigeria statistical bulletin, Nigeria bureau of statistics and Kwara state bureau of statistics. The result showed that there was an acceleration in the amount of loan defaulted by farmers for the period 1984-2014 in the study area and 73% variations was noticed in the exponential time trend for the period. It was concluded that a rigorous effort to speedy the increase and availability of loan process to make more funds available should be inaugurated to increase farmers ability to purchase improved inputs so as to increase productivity in the agricultural sector as a whole and proper monitoring should be put in place.

Keywords— Loan, Default, trend, loan granted, Farmers.

I. INTRODUCTION

Agricultural loan involves giving out credit in cash to farmers for the purpose of farming. There is no doubt that agricultural credit is one of the fundamental ingredients for sustainable agricultural production; as such its accessibility and demand is one of the prerequisites for attaining the national goal of reducing poverty and economic development. Agricultural household models have suggested that farm credit is not only necessitated by the limitations of self-finance, but also by uncertainty pertaining to the level of output and the time lag between inputs and outputs (Kohansal and Mansoori , 2009).

A number of studies (Kohansal and Mansoori, 2009; Okarie, 2004) show that growth rate of investment in agriculture is less than other economic sectors. On this note, financing agriculture is one of the most important factors necessary for the improvement of the quality and quantity of farm harvest leading to increase in farmer's income as well as reducing poverty.

Generally, there is an acceptance of the important role of farm credit and a wide appreciation by most governments of the need for credit in agriculture. However, past trends and problems of agricultural loans are clear but future changes are uncertain. The recognition credit plays in agriculture is also fundamental to development of household food security, which can help farmers to maximize their economic potentials. Failures to recognize the extent of the consequences in which farmers access loan may be costly and can result in misguided policies and programs by the government, which may further bring about complex situation of hunger.

A lot of studies (Agnet, 2004; Asante, *et al.* 2011; Ewuola and Williams, 1995; Ijere, 1998; Nnadozie and Uzoigwe, 2002; Oladeebo and Oladeebo, 2008; Osuntokun, 1980 and Udoh, 2008) have noted the indispensability of credit in the process of socio-economic transformation and none of these studies assesses default trend on the amount granted to famers in Kwara state.

II. METHODOLOGY

Secondary data were used in the assessing the trend of loan granted over the period 1984 to 2014 and it was sourced from the central bank of Nigeria statistical bulletin, Nigeria bureau of statistics and Kwara state bureau of statistics. Trend and growth analysis is used to understand if there is a drift in growth of a variable over a period of time. In modeling time trend for this study the exponential trend or log-linear as employed by Tanko, *et al.* (2010); Maikasuwa and Ala, (2013) was modified and used for the analysis.

The exponential trend equation for loan default was specified as follows:

$$y_t = e^{\beta_0 + \beta_1 t_1 + u_t} \quad \text{.........................1}$$

By taking the natural logarithm of both sides to form an amenable ordinary least square equation as follows:

$$\ln y_t = \beta_0 + \beta_1 t_1 + u_t \text{..........................2}$$

Where: Y= amount of loan defaulted

"t"= time trend variable

β_0 = Intercept of the trend equation

β_1= Trend coefficient

u_t = Error term

To determine if there is acceleration, deceleration or stagnation in loan default in the study area, Quadratic equation time trend variable was fitted as follows:

$$LnY_t = \beta_0 + \beta_1 t_1 + \beta_2 t^2{}_1 + U_t ....3$$

All variables as previously defined $\beta_0,$ β_1, β_2 are parameters to be estimated. In the specification of equation above, the linear and quadratic time variable t^2 allows for the possibility of determining whether there was acceleration, deceleration or stagnation in loan default in the study area during the period of 1984-2014. In determining the pattern of growth our main concern was on β_2 which reveals a measure of growth pattern following Oyenweanku, (2004); Tanko, *et al.* (2010); Maikasuwa and Ala, (2013). β_2 is > 0 and statistically significant it is acceleration, if β_2 is < 0 and statistically significant it is deceleration and if β_2 is positive or negative and not statistically significant then there is stagnation in the growth.

III. RESULTS AND DISCUSSIONS

The result of growth trend was done with the estimated regression coefficient of the time trend variable as in equation 3. The data used is a secondary yearly data using an independent variable for the analysis as time lag (years of study) 1984 to 2014, while the dependent variable is amount of loan granted for the period 1984 to 2014. The adjusted R^2 value of 0.68 shown in the Table 1 implies that time trend, as a variable was very important as it accounted for 68% of variations noticed in loan granted in the study area. The coefficient of the variable (0.0217) was significant suggesting that there has been an increase in loan defaulted for the period 1984-2014.

Table.1: Estimated exponential and quadratic growth trend of loan granted in the study area

Period	$\beta_0,$	β_1	β_2	Adjusted R^2	F- value	Significant level
Exponential trend	-417.7036 [56.08]	0.0217 [0.028]		0.68	7.74	0.00***
Quadratic trend	32277.33 [12989.48]	-31.4861 [12.9927]	0.0081 [0.0033]	0.73	2.517	0.018**

Source: field survey, 2016, *[]=Standard error. ***=1%, **=5%*

To investigate for the existence of acceleration, deceleration or stagnation in trend of loan defaulted in the study area. The result of the quadratic equation in time trend variable was fitted in equation 3. The result in table 1 reflected and revealed that the equation has a good fit giving the R^2 value of 0.73 and the associated F-statistics at 2.517, which is statistically significant at (P<0.05). Table 1 also showed the slope coefficient of t^2 that the value of β_2 (0.0081) is positive and statistically significant at (P<0.05) level of significance. The significant positive value is a confirmation that there is an acceleration in the amount of loan defaulted over the period 1984-2014. It therefore entails the full implementation of proper use of loan granted in order to achieve the needed demand of funds in agriculture thereby translating it to a viable sector of the economy.

IV. CONCLUSION AND RECOMMENDATION

The study concluded that there exists a positive (increase) default trend in the loan defaulted over the years studied. Efforts should be made to increase availability of loan and make more funds available to agriculture so as to boost agricultural activities in the area which will enable farmers have access to improved seeds, farm implements etc.

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